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October 15, 2008

Our Ref.: 083-97354

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Attention: Mr. Bill Brattain, P.E.

**RE: COMMENTS ON TENTATIVE WDRS – NORCAL WASTE SYSTEMS HAY ROAD LANDFILL**

Dear. Mr. Brattain;

On behalf of the Norcal Waste Systems Hay Road Landfill, Inc, (NWSHRLI), the attached comments are submitted regarding the tentative WDRs for the subject facility. These written comments are due by close of business Wednesday, October 15, 2008.

If you have any questions regarding this matter, please call the undersigned.

Sincerely,

**GOLDER ASSOCIATES INC.**

KJohnson for

Christopher M. Richgels, P.E.
Senior Engineer

Kris H. Johnson

Kris H. Johnson, P.G, C.E.G
Senior Consultant

Attachment

CMR/KAJ/cr

**Comments on Tentative WDRs**

Norcal Waste Systems Hay Road Landfill, Inc. (NWSHRLI) has prepared the below comments on the Tentative Waste Discharge Requirements (WDRs) issued on September 15, 2008. The WDRs were issued in response to the August 2008 Joint Technical Document, Revision 14 (JTD) prepared for the Norcal Waste Systems Hay Road Landfill (NWSHRL). The JTD presented documentation in support of some changes in site operation and changes to the environmental monitoring program for the NWSHRL. Written comments on these tentative WDRs are due to the Regional Water Quality Control Board (RWQCB) by 1700 hours on October 15, 2008.

**General Comments**

The Information Sheet for the proposed order should have the following revisions:

Page 1, 2nd paragraph: Disposal Module (DM) 3 should be added to the list of current Class II modules in LF-3.
Page 7, 2nd paragraph: The amended RWD/JTD was submitted on 8 August 2008.

**Comments specific to the WDR Findings**

| Finding | Page | Comment |
|---|---|---|
| 1 | 1 | This finding declares the NWSHRL has been in operation since 1968. Page 1-1 of the JTD indicates the site has been in continuous operation since 1964. Recommend replacing "1968" with "1964." |
| 2 | 1 | This finding describes the eastern area of the facility as an "expansion." This JTD was not proposing an expansion of the facility footprint so this description would be inaccurate. Recommend replacing this finding with the following:<br>"The landfill is located on a 640-acre site, 256 acres of which encompasses the landfill footprint. The facility includes, from west to east, a borrow pit area, existing landfill modules in Landfill Unit 1 (LF-1), Landfill Unit 2 (LF-2), and Landfill Unit 3 (LF-3). The 640 acres correspond to Assessor's Parcel Numbers 42-020-02, 42-020-06 and 42-020-28. Immediately south of the eastern section of LF-3 is a habitat preservation area (ref. Attachment B), which the Discharger is required to maintain under local permit, but is not part of the facility." |
| 3 | 1 | This finding provides a summary description of site operations including a discussion on the individual modules within the 3 Landfill Units at the site. The 5th sentence lists the active modules within LF-3, but does not include recently activated module DM-3.1. We recommend adding DM-3.1 to the active module list of this finding. |
| 4.a. | 2 | This finding provides a list of composite lined modules in LF-3 proposed to receive leachate recirculation including "future modules." It should be noted that will include DM-2.2 at some point in the future. |

**Comments specific to the WDR Findings**

| Finding | Page | Comment |
|---|---|---|
| 4.b. | 2 | This finding suggests the facility is proposing to receive treated wood waste (TWW). In fact, the site has always received TWW. The regulatory status of that discharge was clarified in a combined letter from the State Water Resources Control Board (SWRCB) and the California Integrated Waste Management Board (CIWMB) dated May 27, 2005 regarding the ability of composite-lined landfills already permitted to receive "designated waste" as able to receive TWW without amending current WDRs. Section 4.1.6 of the JTD discusses the management techniques that have been in use at the NWSHRL for disposing of this material. Recommend replacing this finding with the following:<br>"Information on management and disposal of treated wood waste in composite-lined LF-3." |
| 13 | 4 | This finding presents a summary discussion on wastes received at the facility. One such waste type discussed is treated hospital waste. The NWSHRL no longer receives treated hospital waste. Therefore this reference and any references to "treated hospital waste" in the final WDR should be stricken. |
| 14 | 4 | This finding indicates contaminated soil (C-Soil) used in cover operations is stockpiled "on the eastern slope of DM-2.2." This sentence is in conflict with Finding 89 of the WDRs and the JTD (Page 7-10, second bulleted item). Finding 89 accurately describes the management of C-Soil at the NWSHRL. The last sentence of Finding 14 should be struck. |
| 16 | 4 | This finding indicates the NWSHRLI is "proposing" to receive TWW. As discussed above regarding Finding 4.b, the NWSHRL has been receiving TWW. Recommend replacing the 1st sentence of this finding with the following:<br>"The Discharger will be discharging treated wood waste in modules DM-2.2 and DM-3 through DM-11." |
| 19 | 5 | This finding discusses the sludge drying operation in the Land Treatment Unit (LTU) near DM-9.1 (also known as Waste Pile or WP-9.1). It should be noted that sludge is received in any of the Class II modules of LF-3 for either disposal all year or for use as Alternative Daily Cover (ADC) during the dry season in accordance with Tile 27 CCR Sections 20250(b)(1-3). Processing the material for ADC use includes drying operations near the working face. As with the LTU, soil is bermed around the material in the event of unseasonal rain. Recommend replacing this finding with the following:<br>"The Discharger conducts sludge drying operations in a 20-acre area between existing modules WP-9.1 and DM-5 (see Attachment B) and the Class II modules of LF-3. The drying area was constructed, operated and monitored as a Land Treatment Unit per Title 27 CCR Sections 20250(b)(5), 20377 and 20380." |
| 20 | 6 | The "Waste Types" received in LF-1 should be listed as:<br>"Concrete and asphalt demolition debris, tires, friable and non friable asbestos containing waste."<br>C&D waste such as wood is not received in LF-1.<br>Also, Note 2 regarding treated hospital waste should be struck as well as the treated hospital reference in Note 5. |
| 22 | 6 | The following term in the 3rd sentence, "(using the "Ag-Bag" method)" should be struck. |

**Comments specific to the WDR Findings**

| Finding | Page | Comment |
|---|---|---|
| 40 | 9 | Delete ", but PL-11.1 has been dry since early August 2000" and replace with "Water levels in the DM-11 pan lysimeters have remained at minimal levels since August 2000." |
| 43 | 10 | This finding declares landfill gas (LFG) probe GP-8 as part of a monitoring program for LFG migration. As discussed in Appendix N of the JTD, GP-8 has been replaced by GP-9 and is scheduled for destruction. Recommend replacing this finding with the following:<br>"The Discharger submitted proposed modifications to the perimeter LFG monitoring system in the JTD (Appendix N). To monitor for occurrence of gas migration, the Discharger currently monitors nine LFG probes (GP-1, GP-2, GP-4, GP-5, GP-6, GP-7, GP-9, GP-10, and GP-11). Probes GP-2, GP-4, and GP-5 are proposed to be replaced with new probes on the permitted site boundary. The Discharger conducts monitoring on these probes and the pan lysimeters for each lined module." |
| 44 | 10 | This finding discusses the corrective action plan for module DM-11 including landfill gas control. It should be updated to reflect the current status of the landfill gas control system. Recommend replacing this finding with the following:<br>"The Discharger submitted a corrective action plan for DM-11.1 and DM-11.2 in May 2005 that was approved during August 2005. The plan consisted of installing additional probes along the perimeter to provide more data for the design of an in-fill landfill gas control system. A landfill gas collection and control system (GCCS) has been installed in DM-11 as well as DM-2.1, DM-2.2, DM-4, and DM-5. The GCCS will consist of nine new landfill gas wells, the existing landfill gas wells, and nine leachate sump risers. Startup of the full system is expected during the fall of 2008 following the completion of permitting with the local air district. |
| 45 | 10 | This finding discusses corrective action for DM-2.2. It should mention installation of the GCCS. Recommend adding the following sentence at the end of this finding:<br>"As discussed in the comment on Finding 44 above, the Discharger has installed a GCCS in this module to control landfill gas." |
| 46 | 11 | Same comment as for Finding 45 above. |
| 55 | 13 | This finding summarizes the base liner design for future Class II modules. The 5th bullet describes a soil liner component of a 2.5-foot thick compacted clay layer. According to Section 5.2.2 on page 5-3 of the JTD, the base liner design incorporates a 2-foot compacted clay layer. Recommend this finding be changes to reflect the base liner design described in the JTD. |
| 64 | 14 | Add "during the dry season under General Order R5-2008-0081/NPDES Permit CAG995001" to the end of the third sentence. *(Note that preliminary evaluation of the groundwater flow model indicates that the seasonal pumping will achieve the desired groundwater separation, but the amount of time to achieve the separation is longer than the initial estimate of 10 years under continuous pumping.)* |
| 84 | 19 | This finding describes the LTU in length, width, and depth dimensions. Recommend the first sentence be changed to "The LTU is an approximately 20-ac area in the area shown on Attachment B with a maximum depth of 5 feet." |
| 87 | 19 | Strike any reference to "Ag-Bags" in this finding. The food waste compost operation utilizes in-vessel composting but not "Ag-Bags." |

**Comments specific to the WDR Findings**

| Finding | Page | Comment |
|---|---|---|
| 89 | 20 | This finding discusses daily cover and alternative daily cover (ADC) processes at the site. The second sentence implies only soil is used as daily cover during wet weather. This would be an inaccurate description of cover operations regarding ADC usage. The second paragraph on Page 7-12 of the JTD discusses ADC materials to be used during wet weather that satisfy the performance requirements of Section 20690 of Title 27. Recommend changing the second sentence to read:<br>"Soil and approved ADC material is used for daily cover during wet weather." |
| 90 | 20 | This finding describes design flow and leachate management in the Class II modules. The last sentence should be revised to say:<br>"Leachate is also recirculated into Class II modules. During the dry season, leachate is used for dust control on lined modules." |
| 96 | 21 | This finding discusses leachate recirculation proposed for leachate management at the facility. . To maintain consistency with Discharge Specification B.13, it should be amended to read:<br>"The units the Discharger have requested these returns are DM-4, DM-5, DM-11, and future modules." |

The following comments pertain to Section B, "Discharge Specifications," of the tentative WDRs.

| Specification | Page | Comment |
|---|---|---|
| B.7 | 28 | This specification discusses use of ADC. As commented above for Finding 89, and discussed on Page 7-12 of the JTD, the site uses ADC materials that meet the performance requirements of Section 20690 Title 27. These materials are not subject to further demonstration project requirements. |
| B.27 | 30 | This specification discusses operations in the compost area. The last sentence places a restriction on food waste composting that should be reversed to read: "Food waste feedstock shall be limited to in-vessel composting as described in Title 14 CCR." |
| B.28 | 30 | This specification requires an "electronic leak location survey" of the compost area run-off retention basins at least every five years. This particular technology is typically utilized for construction quality control of landfill base liners after leachate collection and removal system (LCRS) gravel has been placed to determine if damage occurred to the liner during placement of LCRS drainage gravel. The technology requires the existence of a soil layer above the liner material for placement of electronic probes to determine locations where electrical current passes from the overlying soil layer to the soil beneath the liner through holes and flaws in the geomembrane.<br>There is no upper soil layer in the retention basins so use of this technology is not appropriate to the basins. The geomembrane liner will be exposed following removal of sediment thus available for visual inspection of holes, damage, and other flaws. Recommend replacing the term "an electronic leak location survey" with "inspection" in the first sentence of this finding. |

The following comments pertain to Section D "Construction Specifications," of the tentative WDRs

| Specification | Page | Comment |
|---|---|---|
| D.8 | 33 | This specification requires the LCRS' of "each unit shall be equipped with meters which continuously record flows." Typical liquid flow meters are easily fouled by leachate constituents and quite inaccurate. The Discharger has found that measuring volume in the onsite storage tanks correlated to sump pump runtime has produced accurate and repeatable measurements of actual leachate flow from the LCRS using monthly measurements which is consistent with Table IV-A of the Monitoring and Reporting Program (MRP). In fact, flow meters are no longer used to measure extracted leachate volumes due to their unreliability with leachate fluids. Recommend replacing this specification with the following:<br>"Each unit's LCRS sumps shall be equipped with automated pumps. Extracted leachate volume from each unit shall be recorded monthly based on accumulated volumes in dedicated tanks. The Discharger shall maintain and implement an O&M plan to ensure that the LCRS pumps are operating properly. The O&M plan shall be kept in the facility office. |

**Tentative Monitoring and Reporting Program**
**Norcal Waste Systems Hay Road Landfill, Inc.**

The following comments are made to the identified sections of the proposed Monitoring and Reporting Program (MRP) for the NWSHRL.

**Section D, Monitoring**

| Item | Page | Comment |
|---|---|---|
| D.1 | 7 | The 2nd paragraph starting Groundwater beneath the western portion… should include wells G-9, G-10M, G-11M, and G-27 in the list. The following excerpt from the monitoring reports explains the sampling protocol for the G-10 and G-11 well sets - *The following sampling decision protocol was established in the Amended ROWD Proposing Changes to the Detection Monitoring Program to identify and sample the monitoring well with the best possibility of identifying a potential release from the landfill in the well G-10 and G-11 areas. The well sampling protocol is outlined below:*<br>• *Well G-27 will be sampled in place of well G-10, because the well will monitor the same depth zone, but inside the slurry wall.*<br>• *Well G-10M will be sampled in place of well G-10R, because the well will be screened in a shallower permeable layer.*<br>• *Well G-10R will only be sampled if well G-10M is dry as a result of low groundwater levels.*<br>• *The two shallowest wells with groundwater in the multiple depth wells G-11, G 11M, and G-11R will be sampled. Therefore, if wells G-11 and G-11M have sufficient groundwater to sample, then well G-11R will not be sampled.* |
| D.1 | 7 | The 3rd paragraph starting The "interwell:…well G-15 has been destroyed and should be removed from the well list. Wells G-26 and G-28 should be added to the list. |
| D.2 | 9 | The 5th paragraph of this section discusses monitoring of fluids in pan lysimeters beneath the LCRS sumps at the site. The second sentence as currently written is inconsistent with Table IVA and IVB monitoring requirements. The term "daily or" should be struck. |
| D.3 | 10 | This monitoring requirement discusses LFG monitoring to be done at the NWSHRL. It should be revised to maintain consistency with Finding 43 of the WDRs. |
| D.3 | 10 | 2nd paragraph – "the presence" should be replaced with ">1 ppm" to be consistent with D-5 - Leak Detection Monitoring criteria. |
| D.4 | 11 | The last paragraph of this monitoring requirement is not consistent with the monitoring requirement described in paragraph 6 of Item 6, "Surface Water Monitoring" on page 12 of the MRP. The intent of this monitoring requirement is to determine impacts to surface water from seeps that escape the confines of the module. The leachate seep monitoring requirement should be revised to be consistent with the surface water monitoring requirement. |
| D.6.b | 12 | Surface water monitoring location SW-6 should be deleted as it is redundant with SW-7, which is located further downstream. |

| Item | Page | Comment |
|---|---|---|
| D.9 | 13 | This monitoring requirement specifies both the low flow and high flow ponds for the composting area be monitored semi-annually during the wet season in accordance with Table VIII. The low flow pond discharges to the high flow pond thus this monitoring requirement is unnecessarily redundant. Only the high flow pond requires this monitoring during the wet season. As discussed below regarding Table VIII, sampling the pond when water storage reaches a level corresponding to the average annual rainfall amount is relevant to protection of surface waters at the site. |

**Section E, Reporting Requirements**

| | | |
|---|---|---|
| E.3.f. | 15 | Last sentence of the first paragraph; Strike orphaned word "Standard." |

**Tables**

| | | |
|---|---|---|
| Table I-A | 19 | The following parameters should have footnote 1 – calcium, magnesium, potassium, and sodium. |
| Tables I-B, II-A, and II-B | 20, 22, and 23 | Footnote 1 from Table I-A should be added and the following parameters should reference the footnote - calcium, magnesium, potassium, and sodium |
| Table III | 26 | The starred note at the bottom of the table should specify "1 part per million of organic vapors or 1.0 percent methane or greater" as the measurement standard to maintain consistency with the monitoring requirements in the last paragraph of Section D.5, "Leak Detection Monitoring," and Table V. |
| Table VIII | 32 | This table requires water samples from the composting area retention ponds on a semi-annual basis – once after the first storm of the winter season and the other at the end of the season. This appears to be based on stormwater sampling requirements for surface water run-off. Water from the compost retention ponds is used in the composting operations, hence is not discharged from the site The pond is designed to retain the annual average rainfall and precipitation from a 25-year, 24-hr storm. Therefore, a pond water sample collected after the first significant storm event will provide no relevant information to determination of any necessary actions required for protection of surface waters onsite as well as offsite. To determine the potential risk of the retained volume to surface waters, a sample should be retrieved when the pond reaches a high water mark indicating average annual rainfall has been captured in the pond. |
| Table IX | 34 | n-, sec-, and tert-butylbenzene are misspelled |
| Table X | 42 | Atrazine and simazine cannot be analyzed using EPA Method 8141A and should be removed from the table. |